UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,104	09/30/2003	Howard Hong-Dough Lee		2442

7590 08/12/2004	EXAMINER
Howard Hong-Dough Lee	TRUJILLO, JAMES K
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Bloomfield, MI 48302	

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/674,104	LEE, HOWARD HONG-DOUGH
	Examiner	Art Unit
	James K. Trujillo	2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 September 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>38-50</u> is/are pending in the application.

    4a) Of the above claim(s) <u>1-37</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>38-50</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The office acknowledges the receipt of the following and placed of record in the file:

Preliminary Amendment dated 9/30/03.

2.   Claims 38-50 are presented for examination. Claims 1-37 have been withdrawn from

further consideration.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claim 38-47, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McKaughan et al., U.S. Patent 5,802,305 ("McKaughan") in view of Crump et al., U.S. Patent

5,689,715 ("Crump").

5.   As to claim 38, McKaughan teaches a communication system comprising:

a.   communications means (network interface card) connected to the Internet and

rendered operable for sending a signal (packet) and thus for initiating an outgoing

communication link (establish communication to share information) to an offline

communications device (a computer in a sleeping state) [col. 1 lines 21-35, col. 4 lines

29-43, col. 5 lines 51-54 and figures 1 and 4];

b. a control system for controlling operation of said communication means (to determine

which packets are to be used to wake up the computer) [col. 7 lines 10-15 and figure 4];

and

c. operating instructions available (to compare packet signals) to said control system for

requesting said communication means to send said signal in accordance with a request

submitted through an incoming communications link (to send packet signal from network

card to computer) from a remote communications device (remote computer), so as to

allow said Internet communication system to provide requested communication from said

remote communications device to said offline remote communication device via the

Internet (remote computer and offline computers will be allowed to share information)

[col. 1 lines 20-35, col. 9 lines 3-13, figure 1].

McKaughan does not expressly teach using a ring signal. McKaughan teaches using a

packet signal, which when appropriate, causes the offline computer to awaken and respond to the

packet for the purposes of sharing information.

Crump teaches sending a ring signal to wake up an offline communication device

(computer) to initiate an outgoing communication link. Crump teaches a computer system

similar to that of McKaughan. The computer system of Crump is woken up in response to an

external event (a ring signal) while the system of McKaughan wakes up in response to a signal

generated in response to an acceptable packet. The system of Crump has the advantage of a

normal operating system in response to a true ring and act upon the data in a system using a

telephone line and modem and reduce spurious state transitions that waste power [col. 4 lines 40-

58].

It would have been obvious to one of ordinary skill in the art, having the teaching of

McKaughan and Crump before him at the time of the invention, to modify the network interface

card of McKaughan to also use a telephone line in addition to the wide area network connection.

One of ordinary skill would have made the modification because it would allow the system of

McKaughan to be used in systems having a modem and telephone lines for access to the wide

area network with the advantage of reducing spurious state transitions.

6.   As to claim 39, McKaughan together with Crump teach the Internet communication

system according to claim 38. Crump teaches wherein said communication means comprises

communication-link means selected from the group consisting of telephone lines [col. 3 lines 59-

64]. McKaughan teaches wherein the communication-link is at least one cable (required for

using a network interface card).

McKaughan together with Crump do not expressly disclose the communication-link

means are selected from the group consisting of at least one optical fiber, at least one hybrid fiber

coax, at least one cellular phone channel, at least one satellite communication channel, at least

one wireless communication channel, and their combinations, for initiating a plurality of said

outgoing communication links.

However, one of ordinary skill in the art would readily recognize that McKaughan

together with Crump would suggest to one of ordinary skill in the art that any type of

communication-link means would work in such a system. Therefore, it would have been obvious

to one of ordinary skill in the art at the time of the invention to modify McKaughan together with

Crump to use communication-link means as above because such means are well known for providing a communication-link. Optical fibers and hybrid coax provide high bandwidth and are resistant to noise. Cellular phone channels, satellite channels, and other wireless channels allow mobility.

7.   As to claim 40, McKaughan together with Crump teach the Internet communication system according to claim 38. Crump further teaches wherein said communication means is adapted to comprise a plurality of local communication circuitry (internal and external modem) connected to the Internet at separate locations, each of said local communication circuitry being rendered operable for initiating a plurality of said outgoing communication links and for establishing another plurality of said incoming communication links (internal and external modems for connection to the Internet and communication) [figure 3B and col. 8 lines 44-51].

8.   As to claim 41, McKaughan together with Crump teach the Internet communication system according to claim 38. Crump further teaches wherein said communication means is adapted to comprise a plurality of local communication circuitry (internal and external modem) connected to the Internet at separate locations, and wherein said operation instructions are adapted to comprise a step of selecting one of said local communication circuitry that is situated at a location with an area code in accordance with said request to send said ring signal to said offline remote communication device [figure 3B and col. 8 lines 44-51]. Specifically, Crump teaches using a ring signal through a telephone line to wake up a computer that is offline. In doing so the area code must be in accordance with the request to send the ring signal. Otherwise the ring would not be sent to the particular offline device.

9.   As to claim 42, McKaughan together with Crump teach the Internet communication

system according to claim 38. Crump further teaches operating instruction comprise a step of

automatically terminating said outgoing communication link selectively (i) if said remote

communication device terminates said incoming or said outgoing communication link, and (ii) if

said Internet communication system completes the sending of requested information to said

offline remote communication device and detects no activity on said outgoing communication

link for a preset period of time (166 activity suspend timeout) [figure 4 and col. 14 lines 25-54].

Specifically, Crump discloses that the remote device would enter a suspend state, which as one

of ordinary skill in the art would appreciate as terminating all activity except to that of power

management.

10.   As to claim 43, McKaughan together with Crump teach the Internet communication

system according to claim 38. McKaughan further teaches memory storage for storing

information to be transmitted between said remote communication device and said offline remote

communication device (system memory 15) [figure 1]. The remote computers of McKaughan

must also have memories in order to operate.

11.   As to claim 44, McKaughan together with Crump teach the Internet communication

system according to claim 38. McKaughan further teaches memory storage (buffers not show

but inherent in a network interface card) for storing information to be delivered thereto, and

wherein said operating instructions are provided for requesting said communication means to

send a message to said offline remote communication device through said outgoing

communication link to instantly notify the delivering of said information. Specifically,

McKaughan uses a network interface card (22) to send messages to said offline remote

communication device [figure 1 and figure 2]. As is well known to those of skill in the art

network interface cards use memory (buffers) to temporarily store information from and to

another communication device. Operating instructions in McKaughan compare incoming

packets to stored packets and determine which packets are sent through the outgoing

communication link to the system memory and CPU of the offline device [figure 4 and

corresponding text].

12.   As to claims 45-47 and 49, McKaughan together with Crump teach the claimed

communication system therefore together they also teach the method of operating the system and

the operating system to enable the communication system.

13.   Claims 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McKaughan and Crump and in further view Danford, U.S. Patent 4,413,158.

14.   As claim 48, McKaughan and Crump taught the claimed method according to claim 45 as

described above. McKaughan and Crump do not expressly teach (i) determining if a forwarding

or routing service is requested, (ii) if yes, instructing said communication means to further send

another outgoing ring signal to another offline remote communication device accordingly, so as

to initiate another outgoing communication link, and (iii) forwarding or routing requested

information to said another remote device.

        Danford teaches a method of determining if a forwarding service is requested [col. 5 lines

52-68], and if so, instructing a communication means to further send another outgoing ring signal

to another remote communication device accordingly, and forward the requested information to

another remote communication device [col. 6 lines 1-22]. The device of Danford is similar to

that of McKaughan together Crump in Danford uses ring signal similar to that as taught by

Crump for communication purposes. Danford would suggest to one of ordinary skill that

forwarding the ring signal to a secondary remote communication device in the event the initial

communication device could not process the ring signal resulting in increased reliability of

properly responding to a ring signal. One of ordinary skill would recognize that the ring signal

of Danford would apply to ring signal taught by Crump.

It would have been obvious to one of ordinary skill in the art, having the teachings of

McKaughan, Crump and Danford before them at the time the invention was made, to modify

McKaughan together with Crump to include the forwarding of the ring signal as taught by

Danford in order to obtain forward of the ring signal of McKaughan together with Crump.

Doing so would increase the reliability that the ring signal would receive a proper response.

15.   As to claim 50, McKaughan together with Crump and Danford taught claimed method

therefore together they also taught the claimed operating system.

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

> U.S. Pat. No. 6,611,531 to Chen et al. This patent teaches generating a ring signal in
> response to a packet.

> U.S. Pat. No. 6,493,780 to Hsu. This patent teaches a system with a wake on a ring for
> power conservation.

> U.S. Pat. No. 6,591,368 to Ryu. This patent teaches a system that controls power of a
> computer system using a wake up LAN signal.

> U.S. Pat. No. 6,366,957 to Na. This patent teaches a system for remotely waking up a
> computer.

U.S. Pat. No. 6,182,146 to Graham-Cumming , Jr.. This patent teaches a system that selectively wakes up based on a packet.

U.S. Pat. No. 6,131,167 to Cruz. This patent teaches waking in response to a ring or a packet.

U.S. Pat. No. 5,894,508 to Kim. This patent teaches a system that controls power of a computer system, which includes a fax, using a ring signal.

U.S. Pat. No. 5,809,118 to Carmello et al. This patent teaches a system that connects to the Internet in response to a ring signal.

U.S. Pat. No. 5,588,054 to Shin et al. This patent teaches a system for remotely waking up a computer using a ring signal.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James K. Trujillo whose telephone number is (703) 308-6291.

The examiner can normally be reached on M-F (7:30 am - 5:00 pm) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Lynne Browne can be reached on (703)308-1159. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 8600—2100

James Trujillo
August 5, 2004